REMARKS

Upon entry of this amendment, claims 4-11 will be pending in this application. Claims 1-3 are canceled without prejudice.

Claims 4 and 5 are similar to original claims 1 and 3, except in claims 4 and 5 additional substituents have been added to formula (I). Phenyl was added to R2. Hydrogen was added to R3. Biphenyl and 1-benzo[b]thiphenyl were added to Ar'. Support for these additional substituents can be found in examples 4, 7, 9 and 10 listed on page 4 of the specification. Changes were also made in claims 4 and 5 to correct typographical errors found in the original claims. Also in claim 5, substiuent "A" in formula (I) includes only the group "N(CHO)OH". Support for this amendment can be found in provisional application 60/364,423.

Claim 7 is the same as original claim 2.

Support for claims 6 and 10 can be found on page 4, lines 35-37 of the specification.

Support for claim 8 can be found on page 14, line 6 through page 15, line 2 of the specification.

Support for claims 9 and 11 can be found on page 12, line 19 through page 13, line 16 of the specification.

No new matter is added.

Applicants' response to the Examiner's objections and rejections is as follows.

I. Objections

The Examiner states that the oath or declaration is defective and that a new oath or declaration in compliance with 37 CFR §1.67(a) identifying this application by application number and filing date is required. The Examiner states that the oath or declaration is defective because the filing date of the provisional application 60/364,423 is incorrect. The correct filing date is March 13, 2002. Applicants submit herewith a new declaration in compliance with 37 CFR §1.67(a) that includes the correct filing date of provisional application 60/364,423.

II. Claim Objections

The Examiner objects to claim 1 because "substituents" (page 16, line 15) is misspelled. Claim 1 has been canceled, thus rendering the rejection moot.

III. Claim Rejections – 35 USC §112

Claims 1-3 are rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Claims 1-3 have been canceled, thus rendering the rejections moot.

IV. Claim Rejections – 35 USC §102(a)

The Examiner has rejected claims 1 and 3 under 35 U.S.C. §102(a) as being anticipated by Harris *et al.* and Chong *et al.* allegedly, because each of these references discloses a compound that is embraced by the instantly claimed invention. Applicants' response to the Examiner's two part rejection is given below.

(a) The Examiner asserts that Compound (c) in Figure 2 on page 2155 of Harris *et al.* is encompassed by the instant invention. Applicants assert that the instant invention does not encompass Compound (c) because R2, of Applicants formula (I), does not contain the substituent *N*-methyl-3-phenylpropanamide. Applicants request that the rejection be reconsidered and withdrawn.

(b) The Examiner asserts that compound 311 on page 68 of Chong *et al.* is encompassed by the instant invention. Applicants assert that the instant invention does not encompass compound 311 because R2, of Applicants formula (I), does not contain the substituent C_{1-4}alkylC(O)NR3R4 where R3 and R4 are taken together with the nitrogen which they are attached to form a heterocyclic ring. Applicants request that the rejection be reconsidered and withdrawn.

V. Claim Rejections – 35 USC §102(b)

The Examiner has rejected claims 1 and 3 under 35 U.S.C. 102(b) as being anticipated by Jacobsen (U.S. Pat. 5,712,300) – see, for instance, Example 1 on page 20 and Jacobsen (WO 97/32846) – see, for example, Example 23 on page 63. The Examiner states that each

of these references discloses at least one compound that is embraced by the instantly claimed invention.

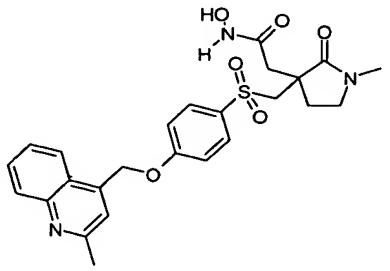
Applicants highlight to the Examiner that the compounds disclosed in both Jacobsen references are hydroxamic acid derivatives. In Applicants' claim 5, the substituent that corresponds to the hydroxamic acid portion of Jacobsen's formula (I) is substituent "A". In Applicants claim 5, substituent "A" does not contain hydroxamic acids (i.e. the group C(O)NHOH) and therefore claim 5 does not embrace any of the compounds specifically disclosed in the Jacobsen references.

Applicants' claim 4 is directed to a method of treating bacterial infections. The Jacobsen references disclose compounds used to treat diseases related to connective tissue degradation. Nowhere in the Jacobsen references does it state that the compounds disclosed therein can be used to treat bacterial infections. Thus, claim 4 does not embrace any therapeutic method disclosed in the Jacobsen references.

In light of the above arguments, the Jacobsen references do not anticipate the instantly claimed invention. Applicants respectfully request that the rejection be reconsidered and withdrawn.

VI. Claim Rejections – 35 USC §102(e)

The Examiner has rejected claims 1 and 3 under 35 U.S.C. §102(e) as being anticipated by Chen *et al.* (U.S. Pat. 6,825,215). Chen *et al.* disclose, for example the compound in column 11, lines 47-49 which is allegedly embraced by the instantly claimed invention. The structure of the compound the Examiner refers to is:



Example 30 in Chen *et al.*

The Chen compound contains a sulfonyl moiety which is in the same position as the R1 substituent of Applicants formula (I). Applicants's R1 substituent does not contain any

sulfonyl groups, thus the instantly claimed invention does not encompass the Chen compound. Applicants respectfully request that the rejection be reconsidered and withdrawn.

VII. Claim Rejections – 35 USC §103

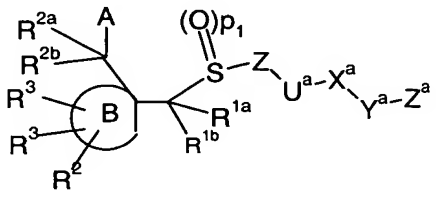
The Examiner has rejected Claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Jacobsen (U.S. Pat. 5,712,300), Jacobsen (WO 97/32846) and Chen *et al.* (U.S. Pat. 6,825,215), each taken alone or in combination with each other when similar utilities are asserted. The Examiner points to Jacobsen '300 (columns 2-5; column 18, lines 3-18; and Example 1 on page 20), Jacobsen '846 (pages 1-7; and Example 23 on page 63) and Chen *et al.* (columns 4-6; column 12; and the compound in column 11, lines 47-49) as each teaching compounds that are either structurally the same as or similar to the instantly claimed compounds. Applicants respectfully traverse this rejection.

Applicants assert that the compounds of claims 5-7 are structurally distinct from those cited in the Jacobsen references, and as such, are not obvious in view of the Jacobsen references. Both Jacobsen '300 and Jacobsen '846 teach various pyrrolidine and imidazolidine rings substituted by a hydroxamic acid group. Applicants' compounds of claims 5-7 are various pyrrolidine and imidazolidine rings substituted by a reverse hydroxamate group. Nowhere in the Jacobsen references does it teach or suggest that the hydroxamic acid group can be replaced with any other functional group, let alone a reverse hydroxamate. Thus, upon reading the Jacobsen references, one of ordinary skill in the art would not have been motivated to make anything other than hydroxamic acid derivatives.

Applicants' method of treatment claims 4 and 8 are also unobvious in view of Jacobsen. The compounds disclosed in the Jacobsen references are useful in treating diseases related to connective tissue degradation whereas Applicants compounds are used to treat bacterial infections. There is nothing in the Jacobsen references to suggest that the compounds disclosed therein would be useful in treating bacterial infections. One of ordinary skill in the art could not have predicted, based on the disclosure of the Jacobsen references, that the compounds of claims 4 and 8 could be used to treat bacterial infections, especially given the unpredictability of chemistry and physiology. Chemistry is empirical, and it is difficult to precisely predict how a given compound will behave. *In re Carlton*, 202 USPQ 165 (CCPA 1979).

The Jacobsen references do not provide adequate teaching or suggestion to lead one of ordinary skill in the art to the instant invention. The Jacobsen references do not disclose Applicants reverse hydroxamate derivatives nor does it teach a method of treating bacterial infections. Given this lack of teaching, the instant invention is unobvious in view of the Jacobsen references. Applicants respectfully request that the rejection be reconsidered and withdrawn.

Applicants' instant invention is also unobvious in view of Chen *et al.* Chen *et al.* teaches a large genus of carbocyclic and heterocyclic compounds substituted by a $-CR^{1a}R^{1b}-S=(O)p1$ group (Formula (I)) that are useful in treating a variety of diseases (as listed in column 12).



Formula (I) from Chen *et al.*

Applicants compounds are structurally distinct from those disclosed in Chen *et al.*, because the R1 substituent of Applicants' formula (I), (which corresponds to the $-CR^{1a}R^{1b}-S=(O)p1$ group of Chen *et al.*) does not contain any S, SO, or SO_2 groups. Applicants submit that the genus in Chen is quite broad and allows for much variability, except for the position and variability of the $-CR^{1a}R^{1b}-S=(O)p1$ group. The genus of Chen clearly shows that the $-CR^{1a}R^{1b}-S=(O)p1$ group cannot be replaced by another functional group and it must be attached to the same carbon atom on the ring that is substituted by $-C-AR^{2a}R^{2b}$. Thus, given the specificity of the genus with regard to the $-CR^{1a}R^{1b}-S=(O)p1$ group, one of ordinary skill would not have been motivated to make or use any carbocyclic or heterocyclic compound that did not contain this group, let alone the pyrrolidine and imidazolidine derivatives of the instant invention. Given the lack of requisite teaching and motivation, the instant invention is unobvious in view of Chen *et al.*

In light of the above arguments applicants assert that the Jacobsen references and Chen *et al.* alone or in combination with each other do not render the instant invention

obvious. Applicants respectfully request that the rejection under 35 U.S.C. §103 be reconsidered and withdrawn.

VIII. Conclusion

This reply is intended to further this case to allowance by addressing each ground of objection and rejection in the Examiner's Office Action. Reconsideration of this application is respectfully requested. Should the Examiner have any questions regarding this application, the Examiner is invited to call the undersigned agent at the number given below.

Respectfully submitted,

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